When you reach the end of your period of induction you will be looking forward to moving on into your early professional development activities. At this stage more than ever becoming research literate is helpful to your development as a teacher, because you can design your teaching and develop your own practice based on previous studies in your field, or on an area of teaching and learning. Your own work then builds on a sound basis of previous work. Research in the context of teaching can be defined in several ways, for example teachers use particular research skills when they work on curriculum development, prepare lessons, resources, schemes of work. Schools are research-rich institutions. Teachers are full-time researchers in one sense, but might not realise this. The process of checking the quality and effectiveness of your teaching requires hypothesising, collecting data, assessing the hypothesis against the data, evaluating, then applying the findings to your teaching. We could so describe the cycle of lesson planning, delivery and evaluation, or writing a scheme of work and evaluating it. In *Learning to Teach in the Secondary School*, 3rd edition, observation schedules and paired observation techniques, work on lesson planning, keeping a reflective journal and evaluating lessons are described as helpful techniques for beginning teachers to use in examining their classroom practice (see particularly Chapters 2.2 and 5.4).

Other kinds of relevant and informative research takes place in schools, for example some members of staff will be engaged on specific research projects, for their own further study, for a course of higher education, such as an MA, or simply to follow their own interests. There may also be specific research projects undertaken by others outside the school, such as a partnership higher education institute, using the school as a source of data. The school management team will routinely use research methods, gathering data on pupil performance for example, as a tool for school improvement, to contribute to raising the quality of teaching and learning. Outside partners, such the local education authority (LEA) and school boards, support much research in the context of schools in order to raise the quality of teaching in schools.
Policy to change educational practices and the promulgation of pedagogical initiatives and strategies often carry a claim to an underlying research base. Therefore, it is important to be an informed user of research, able to judge the validity of the claims made for various initiatives and changes. Recently, networks for practitioners have developed, which support teachers to access and to use research and also to undertake their own small-scale research projects. Being ‘research literate’ and able to evaluate good from bad research is an important skill for teachers, as practitioners and users of educational research.

**OBJECTIVES**

In this chapter you will:

- learn more about investigating your own practice through your own practitioner research;
- find out about why it is important to become research literate and how to go about it;
- investigate sources of information and teacher networks for relevant practitioner research;
- find out about teaching as a research- and evidence-informed practice and where to find such research and evidence to inform your practice.

**WHAT COUNTS AS RESEARCH?**

Earlier it was suggested that many activities which are undertaken in school can be called educational research and it is useful to clarify what research is. Ron Best (2002: 4–5) has suggested that something counts as research to the degree that it:

- seeks to establish the truth (or ‘truths’) about something;
- is undertaken in a systematic (not haphazard) way;
- is rigorous and is not casual;
- is undertaken by someone whose intention it is to seek or establish truth(s) in a systematic and rigorous manner (i.e. someone who has adopted the perspective of a researcher);
- makes findings open to public tests of truth; and
- makes its methodology transparent.

The Hillage Report on *Excellence in Research on Schools* (Hillage, 1998) pointed out that there is no one definition of good research in the educational field. It used the term ‘fitness for purpose’ as a key concept. This means it recognised that there is diversity in methods and context in educational research (National Educational Research Forum [NERF], 2000).

One example of the use of research in schools is the evaluation of school policies. Schools function on the basis of policies and procedures which have been drawn up to assure the smooth running of the school community and to take into account principles such as those of equal opportunities. If these policies and procedures are not to become mere paper exercises the school must respond to changing circumstances. To take one common example from the past years, one year’s examination results show that a particular group in the school
community is underachieving. The senior management team want to know why this has happened and what can be done to change the situation for the following year. They need to gather data systematically, analyse it, evaluate the findings and make recommendations. Consultation should take place at various points, if the school teams are to be engaged. The recommendations then need to be disseminated and on the basis of the enquiry a policy is formed for the following year, or the existing policy is amended.

Another way in which research can be used in school is individual teachers investigating and evaluating their own practice. You may be engaged in this form of research when you want to find out, for example, if teaching in a specific way will raise achievement for one particular group in your class. You may want to understand why one particular class is unresponsive to methods you use successfully with another, parallel class. Another topic might be to understand if you are favouring one type of pupil over another, e.g. the noisy over the quiet, the boys over the girls.

The term ‘action research’ refers to the activity of teachers investigating their own practice (see particularly Learning to Teach in the Secondary School, 3rd edition, Chapter 5.4). The concept was developed principally by Stenhouse (1975). Broadly, Stenhouse viewed much educational research as unable to ‘get at’ the complexity of what goes on in the classroom, because of its distance and its framing of research questions in the form of objective and external questions. A teacher may fruitfully investigate his or her own practice and develop useful ideas to improve this practice, and this knowledge will come from inside the situation. The claim for scientific objectivity in the research, i.e. the researcher as an outsider, cannot apply. Thus action research may not be subject to the same rules as scientific/empirical research. Also, the methods used in the practitioner’s inquiry are themselves experimentally developed in the course of actual inquiries. They develop naturally to fit the question under investigation, ‘and are tested and improved in the course of doing’ (Dewey, 1960: 124).

More recently, action research has become part of a wider involvement by teachers investigating the teaching and learning process and the term ‘practitioner research’ is in widespread use. Practitioner research can be a powerful tool for raising achievement in one area of your practice and the following section will suggest ways in which you might begin such a project.

Reflective task 16.1
How are school policies devised?

Reflect on a school policy you have implemented in the classroom, e.g. behaviour management, sanctions and rewards, anti-bullying, special educational needs (SEN), child protection, differentiation, monitoring and assessment.

Investigate how the policies were devised. Which type of research method was used to collect, analyse and publish the data? Did it produce a good working document, i.e. one which was successfully implemented? Are there any further questions to ask which the policy does not cover?
Undertaking a small-scale practitioner research project

In any piece of practitioner research the first step is to clearly define what is to be investigated. You need to first frame the research question by asking 'What do we want to know?' This is a crucial step and there is a suggested method for doing this in the Reflective task 16.2. You need to make sure that you have a research question which you can answer, i.e. that you have chosen something manageable and practical, given the time and the resources available to you, and that it will yield enough data to enable you to draw reliable conclusions, which can lead to recommendations for you and other teachers to implement.

Reflective task 16.2
Framing a research question

- Think of an investigation or an initiative or innovation you wish to make which will directly impact on your classroom practice. It does not matter if you are going to carry out this investigation in the near future.
- Write a few lines about the investigation or initiative you wish to undertake and turn this into a question, for example: 'I wish to investigate whether individual support to teach vocabulary learning techniques will help Year 7 SEN pupils to become more confident learners.
- Give your question, but not your background notes, to a colleague and ask them if they understand what you will be investigating. Is the question clear? Can they suggest ways for you to collect data?
- Reformulate your question and suggest ways of collecting the data. (Data are usually collected through observing or talking to participants, through questionnaires, or through analysing documents.)

If you are doing any formal research as part of a higher degree or for an outside funder there will be range of areas to consider and some training will be needed in research methods. Useful sources of information on doing research can be found in the books mentioned at the end of this chapter. Care needs to be taken in designing the research and in building in time and practical methods for analysing the data, so that the results are useful. It is therefore advisable to have a research advisor. This would normally be the case if you are working in a team in your school to examine a school initiative, or if you are working as part of a higher degree.

Introduction to small-scale research methods

If you are undertaking a small-scale piece of practitioner research in order to investigate an area of practice you may find the following helpful. Having precisely framed your research question so that it is clear what it means, you need to answer the following questions (adapted from ‘An action research framework’ in Learning To Teach in the Secondary School, 3rd edition, p. 279):

- What do we want to know?
- What do we need to find out?
- What do we need to do to find out?
- How will we know when we have found out?
- What impact will this have on us and our practice?
1. Who has or where are the data needed to answer the question?
2. How much time and what other resources can be devoted to exploring this issue?
3. How are we going to collect the data?
4. When do we need to collect the data?
5. What ethical questions arise from the collection and use of these data?
6. How are we going to analyse and present the data?
7. Are we prepared and able to make changes in the light of the findings?
8. How will we disseminate the findings?

Collecting data

For sociologists and other educational researchers, this choice of method is usually related to their theoretical position or perspective. Those taking a scientific approach use large-scale quantitative methods of collecting data and use this to test a hypothesis. Those taking a more interpretive approach use qualitative methods. However, it is also possible to be methodologically pluralist and use a variety of methods. You should select a small range of methods which complement each other and provide you with as much validity as possible. Having data on the same question coming from two or more sources is good practice, and is known as triangulation.

Here are some methods of collecting data suitable for small-scale educational research:

Qualitative methods

Focus Groups: This involves bringing together a small group of pupils or teachers, in a non-threatening environment, to discuss a selected topic. It could be a whole class or tutor group, but a group of four to 12 is more manageable. The researcher prepares some questions or issues to discuss with the whole group. These provide the opportunity to explore respondents’ attitudes, feelings and perceptions. Encouraging a good, lively discussion and utilising the interactions can produce rich data. The focus group can be taped and then transcribed. Focus groups are useful in exploring issues in the early stage of research or to provide ideas for a questionnaire. Successful groups need a good facilitator to draw in those who don’t participate and to probe sensitively what people say. It is a good idea if the questions are discussed beforehand with a colleague.

Content analysis: Sociologists use this method to analyse the content of the media. It can also be used in school settings. Feminists have used it, for example, to count the frequency of traditional gender roles in school textbooks. This method allows the researcher to measure or simply add up the frequency of a given message. A coding scheme or a list of categories to look for can be drawn up. This could be used to consider how the language and central concerns of school documents have changed over time (e.g. prospectuses or minutes of meetings).

Participant observation: Your classroom observations have involved this method, i.e. observing and recording pupil interactions in natural settings. You will have kept notes of your observations. Extracts from these notes can be included in your report (e.g. whether or not the disciplinary policy worked in reality, or how group work was organised in different classrooms, or whether or not male pupils dominate classroom interaction). You would need to observe a range of different lessons before making any claims.
Interviews: One or two in-depth interviews with members of staff or students about an issue can produce very interesting data (e.g. how resources can be best employed to develop staff or student ICT skills). You will need a list of open-ended questions to guide you. The interviews can be taped and transcribed. This method can also be useful in exploring issues in the early stage of your research or to provide ideas for a questionnaire.

Diaries: Asking teachers or pupils to keep a record or log of their activities over an agreed period of time can also be a useful source of data. They need to be willing and the instructions need to be very clear. Extracts from the diaries can then be used in your report.

(Adapted from Institute of Education, 2002: 20–1)

Quantitative methods

Statistical analysis: An important source of secondary data is official statistics collected and published by the government. School statistics can be usefully compared to national data (e.g. how General Certificate in Secondary Education [GCSE] pass rates for a range of subjects compare to national figures). Your school can be expected to have mechanisms for providing you with individual pupil achievement data collected over a pupil’s school career. These data should enable you to identify underachieving pupils and to closely monitor their progress.

Questionnaires: These can be a useful method of collecting data if you want a larger sample and to generate your own statistics. You need to be clear about exactly what it is you want to find out. This can be done by using some of the above methods at an early stage to discover what the key issues are. This should help you to draw up your questions, which are normally closed to make coding easier. You need to pilot them carefully to make sure they are unambiguous. School registers provide a good sampling frame. Care needs to be taken over the distribution and collection to ensure a good response rate. After coding the data, findings can then be presented. There are software packages to help with the analysis of such data.

What is presented above is a simple account of some research methods. You will need to do more reading before using them effectively. Alongside those methods some teachers have found it useful to keep a diary of how their projects are going, which include musings, reflections and daily interactions which form the background to the research. Keeping this kind of reflective research journal, which later forms the basis of an analytic commentary, can be a useful adjunct to other methods used, as outlined above. The journal forms a narrative of the process of the research. This form of narration can be useful, in conjunction with later critical evaluation and reflection, to gain knowledge and understanding of the processes involved within the complex situation of variables which is your classroom, and within which your research-based understandings have developed (Hiebert et al., 2002).

Ethical issues

It is crucial to consider the ethical issues involved in doing research. Gaining the consent of all those involved and making data anonymous is important. You also need to consider questions of representativeness, reliability and validity. Ethics and professionalism require that researchers are diplomatic, tactful and trustworthy. The following important consider-
ations are based on a professional code of ethics for researchers, developed by the British Psychological Society (1991). There are also specific guidelines for educational research which can be found on the website for the British Educational Research Association (BERA) (http://www.bera.ac.uk).

Issues to consider when researching in the school are:

- relationships between researcher and other teachers, other members of staff, pupils, parents, etc.;
- the importance of evidence/analysis to back up any claim made;
- respect for all who contribute to the research.

These are some guidelines which you must follow:

- treat all information in confidence and do not name anyone, i.e. schools, teachers or pupils. When writing up the results refer to roles, e.g. ‘the information and communications technology (ICT) co-ordinator’ or anonymise in other ways, e.g. Pupil X, School A;
- negotiate access to participants and observe protocol by speaking to all concerned, such as senior teachers, to gain permission from parents, etc., and get permission first for the project outline;
- involve participants by explaining what you are doing and why, and feed back any results to them when possible. Thank them for their participation. Assure them of confidentiality, i.e. that they will not be named or identified in any way;
- verify all statements you make in the report and on any surveys, etc.;
- think carefully about the audience for your surveys and interviews and make appropriate questions and statements;
- be honest about your purpose;
- show your appreciation for any participation;
- consult within the school if in doubt about procedures.

Keeping a reflective research journal, which later forms the basis of an analytic commentary, can be a useful adjunct to other methods used, as outlined above. The journal forms a narrative of the process of the research. This form of narration can be useful in conjunction with later critical evaluation and reflection, to give more information and insights into the processes involved in the research situation. This situation will encompass a complex of variables in which new understandings have developed (Hiebert et al., 2002).

Good teaching is a result of a process of investigation and reflection and doing some research can benefit your teaching, if you wish to improve in an area, for example, or to implement a new initiative.

**ACCESSING RESEARCH AND RESEARCH NETWORKS**

To form a firm foundation for a piece of small-scale practitioner research it is advisable to first find out what else is being done in your area. Here the websites mentioned below will be useful. You need to ask what has already been published recently on your initiative. Research the background and the context. You do not need to go into the area in great detail and in many cases this will be evident to you as the topic will arise out of your direct classroom context.
A useful website for networks and partnerships for teachers undertaking research can be found on the Teachernet site (http://www.teachernet.gov.uk/Research/networksandpartnerships/). The site points out that collaborating by using or undertaking research with other teachers, schools and LEAs may be useful. For example, it may mean you can check findings from research undertaken in your school against that of others. Networks of teachers interested in research operate in some local authorities and regions and there are links to further networks such as those being developed by the Department for Education and Skills (DfES) through the 14–19 Pathfinders, which started in January 2003 (http://www.dfes.gov.uk/14-19pathfinders).

The journal TOPIC, commissioned and published for many years by the NFER (http://www.nfer.ac.uk/research/), is dedicated to practitioner research.

There are a number of associations and support networks which give details of education and practitioner research. The URLs for their websites are given at the end of the chapter. They include BERA and the British Educational Leadership, Management and Administration Society, two active national networks which hold annual conferences, where current educational research is presented. Other networks include the Collaborative Action Research Network (CARN) and the Evidence Based Education Network. The National Grid for Learning (NetL) also provides a list of online educational networks in other countries. Through the European Schoolnet Partner Networks, access to over 20 other national networks is given on the Schoolnet website. The Commonwealth of Learning Electronic Network for Schools and Education also lists school networks in many Commonwealth countries. It is certainly worth exploring these sites if you are undertaking practitioner research.

BEING RESEARCH LITERATE

There are many occasions when your work as a teacher will be based on the findings of educational research, for example if you are implementing a policy on pupils’ preferred learning styles you may be referred to the research in the area (see Chapters 5 and 6). As a ‘consumer’ of research it is important to be able to discriminate and to know that the findings and the recommendations of the research you are using are secure. Brooker and McPherson (1999) have suggested that researchers address the following questions when designing, reading and writing up research:

1. Is there an explanation of the context of the research?
2. Is the researcher’s personal position explained?
3. Is the purpose of the research clear?
4. Is the research design clear and relevant?
5. Are the research methods explained adequately?
6. Does the research identify the data sources?
7. Does the researcher make explicit how the data have changed into a credible account of the research?
8. Does the researcher make reasonable suggestions about the applicability of the research?
9. Are there clear suggestions about how the research might be taken forward?
10. Has the research been summarised in the form of a fuzzy generalisation?
The last question is based on a phrase formulated by another writer on educational research, Bassey (1998). This implies that the results carry an element of uncertainty, framed in language such as ‘indications show that …’ or ‘increased use of ICT has a strong correlation with … and might result in …’. The notion that research results are open to question is an important one.

Using these guidelines will help you to critically evaluate the range of factors which can influence the validity of the research, i.e. to understand its value, the impact it might have, its benefits and its limitations. If you engage in your own research, particularly with the support of an experienced research mentor, you will develop your capacity to engage with the methodologies, including an understanding of the applications of different approaches to research from an informed position.

**Reflective task 16.3**

**Evaluating a research project**

Choose a research report on an area which interests you. You can access reports on some of the websites given above. You might want to look at some of the short reports from the Teacher Training Agency (TTA) Best Practice Research Scholarships, which are action research reports written by practising teachers, published on the Best Practice Research Scholarship (DFES) website (http://www.teachernet.gov.uk/professionaldevelopment/resourcesandresearch/bprs/)

Apply the Brooker and McPherson criteria (outlined above) to the report. Can you tell whether the research gave valid and reliable results? Is the quality of the report indicative of the quality of the research?

**TEACHING AS AN EVIDENCE-BASED PRACTICE**

Teaching is a practice, which has a body of theory and research underpinning it. The practice changes to accommodate changing circumstances, and policy and theory are promulgated to promote change. The need for change and the characteristics of the new practices should be based on evidence, i.e. capable of being justified in a way that stands up to scrutiny according to the criteria outlined above (Best, 2002). The promotion of teaching as an evidence-based practice is a development of the late 1990s, following the practice in medicine. Since the early 1990s there has been a database of evidence-based practice in medicine, called the Cochrane Foundation. This is an online resource which consists of reviews of already existing research in the field of medicine and health care, under key topics. This database can be accessed by practitioners, who can search for key terms on an area in which they need up-to-date information. This gives them access to what are known as systematic reviews of all the relevant research in their topic, giving them an overview of the issues and the current state of understanding of the area under investigation. The reviews are done by leading authorities.

The analogy between education and medicine, as practices similar enough to warrant an analogous approach to research, was most famously made by David Hargreaves in the 1996 inaugural lecture of the TTA. Here he stated that educational research, at the time he was
speaking, was poor value for money in terms of improving the quality of education provided in schools (Hargreaves, 1996: 1).

He criticised educational research on several counts. He said that:

1. It is usually done in isolated portions, i.e. it is ‘non-cumulative’, unlike medical research which builds on previous evidence.
2. It is of little relevance to improving classroom practice.
3. It is often partisan, taking place in a context of methodological controversies which only interest academics.
4. There is a great deal of second-rate research, which does not make a serious contribution to fundamental theory or knowledge.

The Hargreaves lecture was seen as an onslaught on academic educational research. He wanted to situate the focus of functional knowledge about education within schools, with the practitioners themselves, on the analogy with medical research. There is a debate about whether teaching is like medicine and a further debate about how to give teachers the skills and the time to access the research (Hammersely, 1997). However, as a new teacher you are in a better position than previous generations of teachers, both to access educational research and to undertake research on your own practice or an area of school-wide practice. There is much good educational research to inform your work as a teacher and convenient means of accessing the information.

**Funded Initiatives**

The education section of the Evidence for Policy and Practice Information and Co-ordinating Centre (the EPPI-Centre) was set up in 2000 in the Social Sciences Research Unit, within the University of London Institute of Education. The EPPI-Centre is currently engaged on creating systematic reviews that are pieces of research in their own right. They have a particular emphasis on ‘user involvement’. Depending on the research review, users could include parents, teachers and other school staff, governors, LEAs and policy makers. These users ‘can be involved in the development of research strategies, the review protocols, the reviews, and their effective dissemination’ (Torgerson et al., 2001). Further information is available on the EPPI-Centre’s website (http://www.eppi.ioe.ac.uk/).

The EPPI-Centre is not the only centre aiming to produce high-quality systematic reviews, based on the Cochrane model. The Campbell Collaboration (http://www.campbell.gse.upenn.edu/) is beginning a similar programme in the fields of crime and social welfare.

The goal of the international Campbell Collaboration is to produce, disseminate, and continuously update systematic reviews for students of the effectiveness of social and behavioural interventions, including education interventions. The object is to produce systematic reviews of evidence that are useful to policy makers, practitioners and the public … This is to ensure that high quality information on what works, what does not work, and what is promising is readily accessible to people who must make decisions – policy makers, practitioners, and the public. (Boruch et al., 2001: 1)

Systematic reviews should provide information useful to a wide range of users, who will be able to learn about the major issues in a topic of interest, where the relevant research had
been done and what the main findings were. Until a range of systematic reviews of this kind exist and are easily accessible, anyone wishing to access the research which underlies educational policies and strategies has to rely on the guidance given by ‘authorities’ (e.g. the Qualifications and Curriculum Authority [QCA], TTA, Department for Education and Employment [DfEE] and the Office for Standards in Education [OFSTED]). Alternatively she needs access to a first rate education library and also needs time for the task. Practitioners currently have to rely on statements such as ‘research shows that . . .’, without being able to see which research, nor to place the research in the context of debate and discussion. The British Library offers a service in providing research articles which is available to all, and texts can be ordered through local libraries, so those who wish to keep up to date should be able to do so.

Teacher Research Panel (DfES and TTA)

Following on David Hargreaves’s speech the TTA set up the Teacher Research Panel to provide a way for teachers to be nationally involved in promoting and developing teaching as a research and evidence-based profession. The teachers on the panel were able to comment on research which is of direct use to teachers and on dissemination methods which enable that research to reach teachers and to routinely seek clarification and evaluation of the sources of research.

SUMMARY

This chapter has pointed to some of the benefits of becoming research literate. This term implies understanding the range of relevant research and some of the criteria for judging good from bad research. A brief overview of the context and methods of action/practitioner research has been outlined, with a guide to some areas for further development. It is always advisable to seek the support of a research mentor and to read further and some suggestions are given at the end of the chapter.

The importance of understanding what the term ‘research- and evidence-informed practice’ and the notion of ‘research capacity’ have been outlined. A brief overview has been given of some of the new developments in this area and the range of websites available. Using research to further your own practice as a teacher, both to inform and to develop your practice, is now more than ever a possibility and there are a variety of ways in which you will be able to take this further in the coming years.

FURTHER READING


book discusses key issues in the philosophy of educational research. Chapter 6, on action research and practitioner research, is particularly recommended.


The websites mentioned in text are:


British Educational Research Association (BERA) at http://www.bera.ac.uk.

Collaborative Action Research Network (CARN) at http://www.did.stu.mmu.ac.uk/carn.


Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre) at http://www.eppi.ioe.ac.uk/.

European Schoolnet Partner Networks at http://www.eun.org/eun.org2/eun/countries/countries.html.

Evidence-Based Education Network at http://www.cemcentre.org/ebeuk/default.asp.

National Grid for Learning (NGfL) at http://www.ngfl.gov.uk/.
